Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte YASUSHI SETA,
SATOSHI NAKATSUKA,
MICHIHIRO SAWADA,
RYOICHI TSUNORI,
TOKUTARO KIMURA, and
YUTAKA MINAMI

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Appeal No. 2003-0130
Application No. 08/950,187

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ON BRIEF

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Before PAK, OWENS, and PAWLIKOWSKI, Administrative Patent Judges.

PAWLIKOWSKI, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 and 3. We refer to page 1 of appellants' brief regarding the status of the other claims in this application.

Claim 1 is illustrative of the subject matter on appeal and is set forth below:

1. A propylenic copolymer (A) of propylene and ethylene, that satisfies the following conditions (1) to (5):

(1) The ethylene unit content (xa, wt.%) of the copolymer is from 3 to 10 wt.%;

(2) The relation between the boiling diethyl ether extraction (Ea, wt.%) of the copolymer and xa satisfies the formulae (I) or (II):

$$Ea = 0.25xa + 1.1 \quad (xa = 3 \text{ to } 6 \text{ wt.\%}) \qquad (I)$$

$$Ea = 2.6 \quad (xa = 6 \text{ to } 10 \text{ wt.\%}); \qquad (II)$$

(3) The relation between the melting point (Tma, °C) of the copolymer as measured with a differential scanning calorimeter and xa satisfies the formulae (III) or (IV):

$$Tma = 140 \quad (xa = 3 \text{ to } 4 \text{ wt.\%}) \qquad (III)$$

$$Tma = 160 - 5xa \quad (xa = 4 \text{ to } 10 \text{ wt.\%}); \qquad (IV)$$

(4) The copolymer has a melt index (MI, g/10 min.) of from 4 to 12 g/10 min., measured at a temperature of 230°C under a load of 2160 g, according to JIS K7210; and

(5) The isotactic triad fraction in the PPP sequence of the copolymer, as measured in ^{13}C-NMR, is not smaller than 98.0 mol%.

The examiner relies upon the following references as evidence of unpatentability:

Ishimaru et al. (Ishimaru)	5,438,110	Aug. 1, 1995
Twu et al. (Twu)(EPA)	0 341 724	Nov. 15, 1989

Claim 1 stands rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103 as obvious over Twu.

Claims 1 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over Twu.

Claims 1 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over Ishimaru.

OPINION

For the following reasons, we reverse each of the above-mentioned rejections.

I. The rejection of claim 1 under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103 over Twu

We note that when an examiner relies upon a theory of inherency, "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (BPAI 1990). Inherency "may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." Ex parte Skinner, 2 USPQ2d 1788, 1789 (BPAI 1986). Also, the burden is on the examiner to set forth a prima facie case of obviousness or anticipation. See In re Alton, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996); In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

With respect to the anticipation rejection, the examiner has not met this burden for the following reasons.

On page 4 of the answer, the examiner acknowledges that Twu does not explicitly disclose condition (2) and condition (5)

recited in appellants' claim 1. However, the examiner concludes that because the polymers disclosed in Twu are made by processes using catalyst compositions which are substantially identical to those disclosed in appellants' specification, it is reasonable to presume that the claimed properties would be inherent.

Upon our review of Twu, however, we observe that the preparation described, for example, in Example 1, beginning on page 6, of Twu differs from the preparation described beginning on page 49 of appellants' specification, for example. The examiner also recognizes that the processes are not identical as mentioned in the above paragraph. However, we observe that the examiner's analysis does not address the acknowledged differences. The examiner does not explain how, even though differences exist, the resultant copolymer would satisfy conditions (1)-(5) set forth in appellants' claim 1.

Hence, the examiner has not provided a basis to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied prior art. Ex parte Levy, supra. We therefore reverse the anticipation rejection.

With regard to the obviousness rejection, we again note that the initial burden of satisfying a prima facie case of obviousness rests on the examiner. In re Oetiker, 977 F.2d 14, 43, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). In determining whether an invention is obvious, the examiner must consider: 1) the scope and content of the prior art, 2) the differences between the prior art and the claimed invention, 3) the level of ordinary skill in the art, and 4) any objective considerations of nonobviousness that may be present. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 466-67 (1966). Also,

obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggesting, or motivation to do so found either in the reference or in the knowledge generally available to one of ordinary skill in the art. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Thus, the examiner must show some teaching, suggestion, or motivation for modifying Twu to produce the claimed invention.

Here, the examiner asserts that appellants' claimed subject matter would have been obvious because "[i]t appears that the claimed subject matter is within the generic disclosure of the prior art and expected to work." (answer, page 4). This reasoning is completely devoid of any teaching, suggestion, or motivation found either in the reference or in the knowledge generally available to one of ordinary skill in the art. Because of this lack of teaching, suggestion, motivation or explanation, we determine that the examiner has not established a prima facie case of obviousness. Id.

We therefore reverse the rejection of claim 1 under 35 U.S.C. § 102(b), or in the alternative, under 35 U.S.C. § 103 in view of Twu.

II. The rejection of claims 1 and 3 under 35 U.S.C. § 103 over Twu

We reverse this rejection for the same reasons enunciated above with respect to the obviousness rejection, and further note that claim 3 falls with claim 1.

III. The rejection of claims 1 and 3 under 35 U.S.C. § 103 over Ishimaru

Beginning on page 5 of the answer, the examiner states that the copolymer prepared in Examples 8 and 9 of Ishimaru satisfy conditions (1) and (3) of appellants' claim 1.

With respect to condition (2) of claim 1, the examiner acknowledges that the declaration (Exhibit B of the brief) demonstrates that the copolymer of Ishimaru does not satisfy formula (I) of condition (2) of claim 1. However, the examiner states that an objective of Ishimaru is to provide a polyethylene/ethylene copolymer with high stereoregularity, therefore, improved anti-blocking and mechanical properties. The examiner concludes that it would have been obvious to employ Ishimaru's teaching to increase the stereoregularity of propylene repeat units in the polymer chain by using an electron donor such as a saline. (answer, pages 5-6).[1]

Based on the above reasoning of the examiner, it appears the examiner's position is that condition (2) of appellants' claim 1 is a result determinable variable, that is, if one were to

[1] The examiner discusses condition (4) on page 6 of the answer. We are able to reach our determinations in this case without discussing condition (4), and therefore do not present discussions regarding condition (4) herein. With respect to condition (5) of claim 1, we cannot find a discussion of this condition in the examiner's answer in this rejection.

increase the stereoregularity of the propylene repeat units, the weight percent ether extraction of the copolymer would be expected to decrease.

On page 11 of the brief, appellants argue that the weight percent ether extraction value is not always directly related to the stereoregularity of the copolymer.

On page 9 of the answer, the examiner responds and states that the copolymer of appellants' claims and those cited Ishimaru share similar ethylene unit distribution in the copolymer because they all are prepared by a process which is substantially similar to each other.

Again, we observe that the examiner concludes that the instantly claimed copolymer must be similar to the copolymer of Ishimaru (similar ethylene unit distribution) because appellants' copolymer and the copolymer of Ishimaru are each prepared by a process which is substantially similar to each other.

A comparison made of the process in which the copolymer is prepared according to Ishimaru (the description beginning in column 3 at line 62, for example) with the method of preparing the copolymer set forth in appellants' specification, beginning on page 49, illustrates differences in preparation. The examiner also acknowledges that the processes are not identical, as discussed above. Yet, the examiner does not explain how, in spite of the acknowledged differences, that the ethylene unit distribution of the copolymer in Ishimaru would be similar to the ethylene unit distribution of the copolymer of appellants' claim 1. Hence, even if one of ordinary skill in the art would have been led to increase the stereoregularity of the propylene repeating units of the copolymer in Ishimaru, the examiner has not established that the resultant copolymer would in fact

satisfy condition (2) (as well as conditions (4) and (5), see footnote 1), in view of the acknowledged differences in preparation.

Because the examiner has not met the required burden, we reverse this rejection. In re Oetiker, 977 F.2d 14, 43, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

We observe appellants' discussion (in both the brief and reply brief) of Exhibit B and Exhibit C. Because we have determined that the examiner has not established a prima facie case of anticipation or obviousness, according to our above discussion, we do not comment on these exhibits in making our determinations herein. See In re Geiger, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

IV. Conclusion

Each of the rejections is reversed.

REVERSED

Chung K. Pak Administrative Patent Judge	
Terry J. Owens Administrative Patent Judge	BOARD OF PATENT APPEALS AND INTERFERENCES
Beverly A. Pawlikowski Administrative Patent Judge	

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